

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image processing device comprising:

a processing degree setting unit that sets a target degree for color processing with regard to at least two properties of a plurality of properties of an image signal, as a single target processing degree;

a processing coefficient group creation unit that creates a processing coefficient group for performing color processing of the single target processing degree, based on the single target processing degree set by the processing degree setting unit and a plurality of base coefficient groups that perform the color processing of the single target processing degree to differing degrees, wherein the plurality of base coefficient groups are created in advance; and

a color processing execution unit that performs the color processing of the single target processing degree with respect to the image signal using the processing coefficient group created by the processing coefficient group creation unit,

wherein the color processing of the single target processing degree is memory color correction,

wherein the plurality of base coefficient groups do not change with respect to the image signal, [[and]]

wherein the plurality of base coefficient groups have conversion characteristics such that a point in a color space according to the image signal after the memory color correction is in a predetermined region in the color space[[.]], and

wherein the processing degree setting unit sets: a default value for the single target processing degree; a first boundary value, which is an upper limit value for the single target processing degree; and a secondary boundary value, which is a lower limit value for the single target processing degree,

wherein the processing coefficient group creation unit creates: a default processing coefficient group corresponding to the default value; a first processing coefficient group corresponding to the first boundary value; and a second processing coefficient group corresponding to the second boundary value,

wherein, in a case when the single target processing degree is a value in a range between the default value of the single target processing degree and the first boundary value, the processing coefficient group creation unit creates the processing coefficient group for performing

the memory color correction by interpolating the default processing coefficient group and the first processing coefficient group based on the single target processing degree, and wherein, in a case when the single target processing degree is a value in a range between the default value of the target degree and the second boundary value, the processing coefficient group creation unit creates the processing coefficient group for performing the memory color correction by interpolating the default processing coefficient group and the second processing coefficient group based on the single target processing degree.

2. (Previously Presented) The image processing device according to claim 1,
wherein the processing coefficient group creation unit creates the processing coefficient group by interpolating or extrapolating the plurality of base coefficient groups based on the single target processing degree.
3. (Original) The image processing device according to claim 1,
wherein the plurality of properties include a hue, a vividness, and a brightness of the image signal.
4. (Cancelled)
5. (Previously Presented) The image processing device according to claim 1,
wherein the processing degree setting unit sets a correction trend of the memory color correction as the single target processing degree, and
wherein the processing coefficient group creation unit creates the processing coefficient group by interpolating or extrapolating the plurality of base coefficient groups that perform the memory color correction with different correction trends based on the single target processing degree.
6. (Previously Presented) The image processing device according to claim 1,
wherein the processing degree setting unit sets a correction strength of the memory color correction as the single target processing degree, and

wherein the processing coefficient group creation unit creates the processing coefficient group by interpolating or extrapolating a base coefficient group that performs the memory color correction of a predetermined correction strength and a base coefficient group with which the memory color correction is not performed, based on the single target processing degree.

7. (Previously Presented) The image processing device according to claim 1,
wherein the plurality of base coefficient groups are a plurality of base matrix data whose size corresponds to the number of the plurality of properties of the image signal, and
wherein the color processing execution unit performs a matrix computation on the image signal using processing matrix data created by the processing coefficient group creation unit.

8. (Previously Presented) The image processing device according to claim 7,
wherein the processing coefficient group creation unit creates the processing matrix data by interpolating or extrapolating the plurality of base matrix data based on the single target processing degree.

9. (Previously Presented) The image processing device according to claim 1,
wherein the plurality of base coefficient groups are a plurality of base lookup tables that store values corresponding to the values of the image signal after a previous memory color correction has been performed, and
wherein the color processing execution unit performs the memory color correction on the image signal using a processing lookup table created by the processing coefficient group creation unit.

10. (Previously Presented) The image processing device according to claim 9,
wherein the processing coefficient group creation unit creates the processing lookup table by interpolating or extrapolating the plurality of base lookup tables based on the single target processing degree.

11. (Previously Presented) The image processing device according to claim 1,

wherein the processing degree setting unit includes: a first processing degree setting unit that sets a first target processing degree, which is a target for a correction trend of the memory color correction; and a second processing degree setting unit that sets a second target processing degree, which is a target for a correction strength of the memory color correction, and

wherein the processing coefficient group creation unit creates the processing coefficient group by interpolating or extrapolating the plurality of base coefficient groups that perform the memory color correction at different correction trends, based on the first processing degree and the second processing degree.

12. (Previously Presented) The image processing device according to claim 1,

wherein the processing coefficient group creation unit creates the processing coefficient group by changing only a specific section of the plurality of base coefficient groups.

13. (Previously Presented) The image processing device according to claim 12,

wherein the specific section of the plurality of base coefficient groups is a section that is determined by the processing degree setting unit.

14. (Previously Presented) The image processing device according to claim 12,

wherein the specific section of the plurality of base coefficient groups is a section of the plurality of base coefficient groups that gives a transformation coefficient for a predetermined memory color.

15 - 17. (Cancelled)

18. (Currently Amended) An image processing method comprising the steps of:

(a) setting, using a processor, a target degree for color processing with regard to at least two properties of a plurality of properties of an image signal, as a single target processing degree;

(b) creating a processing coefficient group that performs color processing of the single target processing degree, based on the single target processing degree that is set in the step (a) and a plurality of base coefficient groups that perform the color processing of the single target

processing degree to differing degrees, wherein the plurality of base coefficient groups are created in advance; and

(c) performing the color processing of the single target processing degree with respect to the image signal using the processing coefficient group that is created in the step (b),

wherein the color processing of the single target processing degree is memory color correction,

wherein the plurality of base coefficient groups do not change with respect to the image signal, [[and]]

wherein the plurality of base coefficient groups have conversion characteristics such that a point in a color space according to the image signal after the memory color correction is in a predetermined region in the color space[[.]], and

wherein the setting the target degree for color processing includes setting: a default value for the single target processing degree; a first boundary value, which is an upper limit value for the single target processing degree; and a secondary boundary value, which is a lower limit value for the single target processing degree.

wherein the creating the processing coefficient group that performs color processing of the single target processing degree includes creating: a default processing coefficient group corresponding to the default value; a first processing coefficient group corresponding to the first boundary value; and a second processing coefficient group corresponding to the second boundary value.

wherein, in a case when the single target processing degree is a value in a range between the default value of the single target processing degree and the first boundary value, the processing coefficient group for performing the memory color correction is created by interpolating the default processing coefficient group and the first processing coefficient group based on the single target processing degree, and

wherein, in a case when the single target processing degree is a value in a range between the default value of the target degree and the second boundary value, the processing coefficient group for performing the memory color correction is created by interpolating the default processing coefficient group and the second processing coefficient group based on the single target processing degree.

19. (Currently Amended) A non-transitory computer-readable storage medium having stored thereon an image processing program that performs color processing of an image signal through a computer, wherein when executed, the image processing program causes the computer to perform an image processing method comprising the steps of:

(a) setting, using a processor, a target degree for the color processing with regard to at least two properties of a plurality of properties of the image signal, as a single target processing degree;

(b) creating a processing coefficient group that performs color processing of the single target processing degree, based on the single target processing degree set in the step (a) and a plurality of base coefficient groups that perform the color processing of the single target processing degree to differing degrees, the plurality of base coefficient groups being created in advance; and

(c) performing the color processing of the single target processing degree with respect to the image signal using the processing coefficient group created in the step (b),

wherein the color processing of the single target processing degree is memory color correction, and

wherein the plurality of base coefficient groups do not change with respect to the image signal, [[and]]

wherein the plurality of base coefficient groups have conversion characteristics such that a point in a color space according to the image signal after the memory color correction is in a predetermined region in the color space[[.]], and

wherein the setting the target degree for color processing includes setting: a default value for the single target processing degree; a first boundary value, which is an upper limit value for the single target processing degree; and a secondary boundary value, which is a lower limit value for the single target processing degree,

wherein the creating the processing coefficient group that performs color processing of the single target processing degree includes creating: a default processing coefficient group corresponding to the default value; a first processing coefficient group corresponding to the first boundary value; and a second processing coefficient group corresponding to the second boundary value,

wherein, in a case when the single target processing degree is a value in a range between the default value of the single target processing degree and the first boundary value, the processing coefficient group for performing the memory color correction is created by interpolating the default processing coefficient group and the first processing coefficient group based on the single target processing degree, and

wherein, in a case when the single target processing degree is a value in a range between the default value of the target degree and the second boundary value, the processing coefficient group for performing the memory color correction is created by interpolating the default processing coefficient group and the second processing coefficient group based on the single target processing degree.

20. (Currently Amended) An integrated circuit device comprising:

a processing degree setting portion that sets a target degree for color processing with regard to at least two properties of a plurality of properties of an image signal, as a single target processing degree;

a processing coefficient group creation portion that creates a processing coefficient group for performing color processing of the single target processing degree, based on the single target processing degree set by the processing degree setting portion and a plurality of base coefficient groups that perform the color processing of the single target processing degree to differing degrees, wherein the plurality of coefficient groups are created in advance; and

a color processing execution portion that performs color processing of the single target processing degree with respect to the image signal using the processing coefficient group created by the processing coefficient group creation portion,

wherein the color processing of the single target processing degree is memory color correction, and

wherein the plurality of base coefficient groups do not change with respect to the image signal, [[and]]

wherein the plurality of base coefficient groups have conversion characteristics such that a point in a color space according to the image signal after the memory color correction is in a predetermined region in the color space[[.]], and

wherein the processing degree setting portion sets: a default value for the single target processing degree; a first boundary value, which is an upper limit value for the single target processing degree; and a secondary boundary value, which is a lower limit value for the single target processing degree.

wherein the processing coefficient group creation portion creates: a default processing coefficient group corresponding to the default value; a first processing coefficient group corresponding to the first boundary value; and a second processing coefficient group corresponding to the second boundary value.

wherein, in a case when the single target processing degree is a value in a range between the default value of the single target processing degree and the first boundary value, the processing coefficient group creation portion creates the processing coefficient group for performing the memory color correction by interpolating the default processing coefficient group and the first processing coefficient group based on the single target processing degree, and

wherein, in a case when the single target processing degree is a value in a range between the default value of the target degree and the second boundary value, the processing coefficient group creation portion creates the processing coefficient group for performing the memory color correction by interpolating the default processing coefficient group and the second processing coefficient group based on the single target processing degree.

21 - 24. (Cancelled)